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- (71) Applicant(s)

Scientific Generics Limited (Incorporated in the United Kingdom) Harston Mill, HARSTON, Cambridgeshire, CB2 5GG, United Kingdom

(72) Inventor(s)

Richard Alan Doyle

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Andrew James White Victoria Ann Clark

(74) Agent and/or Address for Service
Beresford & Co
2/5 Warwick Court, High Holborn, LONDON,
WC1R 5DH, United Kingdom

## (54) Abstract Title Position encoder

(57) A linear position sensor is provided which employs phase quadrature sensor windings, an excitation winding and a resonator. When an excitation current is applied to the excitation winding, it causes the resonator to resonate which in turn induces signals in the sensor windings. The sensor windings are spatially arranged so that the electromagnetic coupling between them and resonator varies with the position of the resonator. The excitation windings, phase quadrature windings and resonant circuit are arranged so that the magnetic fields involved in the operation of the position sensor are substantially parallel to each other and the direction of movement of the resonator. Consequently, the effect of rotation of the resonator or lateral movement of it relative to the excitation and phase quadrature windings is alleviated.

